

REVIEWS

1980 United States Pharmacopeia-National Formulary. The United States Pharmacopeial Convention. 1980. 1505 pp. 21 × 28.5 cm. Price \$90.00 postpaid (domestic and foreign), including all annual supplements to USP XX and NF XV; separately, \$65.00 for the book and \$7.00 for the first supplement. (Available from Mack Publishing Co., 20th and Northampton Streets, Easton, PA 18042; orders also may be placed with state pharmaceutical associations.)

For the first time, the United States Pharmacopeia and the National Formulary are published together in one volume. These compendia set forth legally enforceable standards for drug strength, quality, purity, packaging, and labeling.

USP XX comprises the first portion of this volume. Following a section of introductory material, additions, deletions, and title changes made since USP XIX are listed. Featured next are more than 2300 monographs covering drug substances and dosage forms. The monographs include definitions of identity, packaging and storage information, identification tests, and assays. Category, dose, sizes available, and dispensing information previously included in USP-NF monographs now appears in a separate book, USP Dispensing Information.

The 331-page section of general chapters that follows the monographs includes descriptions of microbiological tests, biological tests and assays, chemical tests and assays, and physical tests and determinations. The general chapters also include discussions of topics such as dosage form stability, controlled drug regulations, and child-resistant containers.

The next section includes descriptions of the reagents, indicators, and solutions that are required in conducting USP and NF tests and assays. The final section of USP XX contains reference tables, among which is a listing of pharmaceutical ingredients by category. A table that gives descriptive and solubility statements for USP and NF substances also is included.

The section of the book corresponding to NF XV also begins with an introductory discussion. Almost 200 monographs for inactive pharmaceutical ingredients are given in NF XV. These monographs also include identity statements along with packaging and storage information, identification tests, and assays.

A 128-page appendix to USP XX follows, which includes excerpts of Federal antibiotic regulations. The book concludes with a combined index to USP XX and NF XV.

The standards set forth by USP and NF are enforced by the U.S. government and by state governments. The USP XX-NF XV standards became official July 1, 1980.

Staff Review

United States Pharmacopeia Dispensing Information. The United States Pharmacopeial Convention. 1980. 20.5 × 28.5 cm. 816 pp. Price \$18.75, including updates (quantity discounts available). (Available from Mack Publishing Co., 20th and Northampton Streets, Easton, PA 18042.)

This new companion to the United States Pharmacopeia-National Formulary presents dispensing information for both the practitioner and the patient. Over 300 experts in pharmacy, medicine, dentistry, and nursing participated in the review process, and additional review and input were provided by hundreds of other practitioners and patients.

The first of the three sections of this book contains information oriented toward the health care provider. There are nearly 600 pages of drug monographs arranged in alphabetical order by generic name. Each monograph includes a category statement, precautions to consider, side effects, patient consultation, general dosing information, and dosage forms. There are 364 general monographs providing information on almost 1200 drug substances and products which represent thousands of different brands.

The second section contains patient-oriented information presented in nontechnical language. This material should aid in reinforcing the therapy selected by the prescriber. There are 213 monographs, including 42 class monographs representing 155 drug substances. The information corresponds to that presented in the prescriber-oriented section.

The third section is an index listing drug entities by official names,

categories of use, and selected medical information such as pregnancy warnings and breastfeeding warnings. There are cross-references by selected brand names (both U.S. and Canadian) and older nonproprietary names.

Bimonthly updates of this book will provide information on important new drugs as well as changes in information for previously included drugs. Updates are included in the stated price. The first update is provided with the main volume and concentrates on topical and vaginal products.

Staff Review

Fundamentals of Nuclear Pharmacy. By GOPAL B. SAHA. Springer-Verlag New York Inc., 175 Fifth Ave., New York, NY 10010. 1979. 272 pp. 15 × 23 cm. Price \$19.90.

This book is meant to be used as a textbook for courses on nuclear pharmacy aimed toward nuclear pharmacists, nuclear medicine technologists, and nuclear medicine residents. It is based on courses taught to such students at the University of Arkansas for Medical Sciences. In the author's own words, "the topics included are comprehensive, ranging from the basic concept of atomic structure to practical clinical uses of radiopharmaceuticals."

Included are 12 chapters on the following topics: The Atom; Radioactive Decay; Production of Radionuclides; Radionuclide Generators; Radiopharmaceuticals; Radiolabeling of Compounds; Characteristics of Specific Radiopharmaceuticals; Quality Control of Radiopharmaceuticals; Radiopharmacy; Radiation Dosimetry, Safety, and Regulations; *In Vitro* Tests; and Radiopharmacology in Nuclear Medicine (which gives a brief description of a variety of nuclear medicine procedures). Each chapter is followed by a series of questions (answers are given in an appendix) designed to test the students' understanding of the material presented.

In general, the chapters are well written, with complex theoretical concepts explained in an easily understandable manner. The depth of the material is appropriate for the indicated audience. Especially well written are those chapters dealing with the more practical aspects of nuclear pharmacy such as the quality control of radiopharmaceuticals, radiopharmacy, safety, *in vitro* tests, and radiopharmacology. In all cases, ample illustrations and examples aid the reader in gaining a practical understanding of the material.

In summary, this is an excellent, reasonably priced textbook for the intended audience and should find widespread acceptance by both students and instructors.

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Polarography of Molecules of Biological Significance. Edited by W. FRANKLIN SMYTH. Academic, 111 Fifth Ave., New York, NY 10003. 1979. 326 pp. 15 × 23 cm. Price \$47.50.

This book covers the polarography of organic molecules that have applications in pharmacy, pharmacology, basic medical sciences, environmental sciences, and agriculture. The authors review the literature published since 1965.

The first part of the book is an introduction to voltammetric analysis and consists of two chapters. The first chapter has a brief outline of the voltammetric methods and their scope and advantages, sampling, initial treatment, separation techniques of the active component, and methods to make an electroactive molecule. Chapter 2 discusses the practical aspects of the voltammetric method, including the choice of solvents, supporting electrolytes, pH, electrodes, cells, and potentiostats. The theoretical aspects of the different voltammetric techniques are discussed to allow optimum selection.

The second part of the book (eight chapters) is the application of polarography to different fields. Three chapters deal with the analysis of pharmaceuticals. The substances discussed include psychotropic, hyp-

notic, and sedative drugs, vitamins, CNS agents, antituberculins, purines, catechols, catecholamines, and antibiotics containing a nitro group. One chapter is concerned with the basic medical sciences, including clinical medicine, chemical carcinogenesis, neurophysiology, virology, immunology, and cells. The polarographic analysis of organic compounds in the aqueous environment is discussed in one chapter. Another chapter discusses the analysis of organic compounds used in agriculture. The last two chapters are concerned with the analysis of organometallic compounds containing mercury, tin, lead, germanium, and arsenic.

This much-needed update discusses developments in the polarographic analysis of organic molecules that have occurred since Peter Zuman wrote "Organic Polarographic Analysis" in 1965. The book is well edited and is easy to read and understand. Each chapter has its own table of contents, and there is a subject index that covers the entire book. Furthermore, each chapter has adequate references that enable the reader to extend beyond the scope of the present book.

There are minor flaws. Chapter 4 should have stated that the $E_{1/2}$ range of $-0.1 \rightarrow -0.4$ v (saturated calomel electrode) is for a nitro group conjugated to an aromatic system. There are other antibiotics containing a nitro group attached to an aliphatic system, such as everninomicins, that can be determined polarographically [Kabasakalian *et al.*, *J. Pharm. Sci.*, **63**, 641 (1974)]. It also is unfortunate that the polarographic analysis of an important compound such as adriamycin (doxorubicin) was omitted [Rao *et al.*, *J. Electrochem. Soc.*, **125**, 534 (1978)]. There is a printing error in the last paragraph on p. 19; $(-1.5 \rightarrow 17$ v) should be 1.7 v.

With the exception of these minor criticisms, the book succeeds admirably in its goal. It is recommended for addition to the library of research workers in the area of pharmaceuticals and allied medicine, analytical chemists, environmental scientists, and agriculture.

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NOTICES

Drug Treatment: Principles and Practice of Clinical Pharmacology and Therapeutics, 2nd Ed. Edited by GRAEME S. AVERY. Adis Press, 515 Madison Ave., New York, NY 10022. 1980. 1382 pp. 17 × 26 cm.

Microbial Drug Resistance, Vol. 2. Edited by SUSUMU MITSUHASHI. University Park Press, 233 E. Redwood St., Baltimore, MD 21202. 1979. 439 pp. 14 × 23 cm. Price \$42.50.

Prevention and Detection of Cancer, Part II, Vol. 2: Cancer Detection in Specific Sites. Edited by HERBERT E. NIEBURGS. Dekker, 270 Madison Ave., New York, NY 10016. 1980. 2456 pp. 18 × 25 cm. Price \$69.50.

Nutritional Improvement of Food and Feed Proteins. Edited by MENDEL FRIEDMAN. (Advances in Experimental Medicine and

Biology, Vol. 105.) Plenum, 227 W. 17th St., New York, NY 10011. 1978. 882 pp. 16 × 25 cm. Price \$69.50.

Anatomie Physiologie Pathophysiologie des Menschen: Ein Lehrbuch für Pharmazeuten und Biologen. By GERHARD THEWS, ERNST MUTSCHLER, and PETER VAUPEL. Wissenschaftliche Verlagsgesellschaft, Stuttgart, West Germany. 1980. 792 pp. 16 × 24 cm.

Pharmacology of Ganglionic Transmission. Edited by D. A. KHARKEVICH. (Handbook of Experimental Pharmacology, Vol. 5.) Springer-Verlag New York Inc., 444 Hartz Way, Secaucus, NJ 07094. 1980. 531 pp. 16 × 24 cm. Price \$134.75.

Electrophoresis—A Survey of Techniques and Applications. Part A: Techniques. Edited by Z. DEYL. (Journal of Chromatography Library, Vol. 18.) Elsevier/North Holland Inc., 52 Vanderbilt Ave., New York, NY 10017. 1979. 390 pp. 15 × 24 cm. Price \$83.00.

Handbook of Water-Soluble Gums and Resins. Edited by ROBERT L. DAVIDSON. McGraw-Hill, 1221 Avenue of the Americas, New York, NY 10020. 1980. 657 pp. 15 × 23 cm. Price \$39.50.

The Essential Guide to Prescription Drugs, Revised Edition. By JAMES W. LONG. Harper & Row, 10 E. 53rd St., New York, NY 10022. 1980. 863 pp. 16 × 23 cm. Price \$25.00 cloth and \$8.95 paper.

Progress in Drug Research, Vol. 23. Edited by ERNST JUCKER. Birkhäuser, Basel, Switzerland. 1979. 320 pp. 16 × 24 cm.

The Neurobiology of Dopamine. Edited by A. S. HORN, J. KORF, and B. H. C. WESTERINK. Academic, 111 Fifth Ave., New York, NY 10003. 1979. 723 pp. 15 × 23 cm. Price \$83.00.

Hagers Handbuch der Pharmazeutischen Praxis, 4th Ed., Vol. 6, Part C: T-Z. Edited by P. H. LIST and L. HÖRHAMMER. Springer-Verlag, Heidelberger Platz 3, Postfach D 1000, Berlin 33, West Germany. 1979. 582 pp. 17 × 24 cm. Price \$88.00.

Monoamine Oxidase: Structure, Function, and Altered Functions. Edited by THOMAS P. SINGER, R. W. VON KORFF, and DENNIS L. MURPHY. Academic, 111 Fifth Ave., New York, NY 10003. 1979. 557 pp. 15 × 23 cm.

Isoenzyme Analysis. By D. W. MOSS. (Analytical Sciences Monographs No. 6.) The Chemical Society, Burlington House, London W1V 0BN, England. 1979. 163 pp. 13 × 22 cm. Price \$22.00.

The International Pharmacopoeia, 3rd Ed., Vol. 1: General Methods of Analysis. World Health Organization, 1211 Geneva 27, Switzerland. 1979. 223 pp. 15 × 24 cm. Price Sw. fr. 24.

Clinical Pharmacological Evaluation in Drug Control. (EURO Reports and Studies 13.) World Health Organization, 1211 Geneva 27, Switzerland. 1979. 31 pp. 15 × 21 cm. Price Sw. fr. 5.

The Selection of Essential Drugs. (Technical Report Series 641.) World Health Organization, 1211 Geneva 27, Switzerland. 1979. 44 pp. 14 × 20 cm. Price Sw. fr. 3.

NEW JOURNALS

Biomaterials. Edited by S. D. BRUCK and G. W. HASTINGS. IPC Science and Technology Press, 205 E. 42nd St., New York, NY 10017. 1980. 20 × 30 cm. Price \$117.00 (four issues per year).